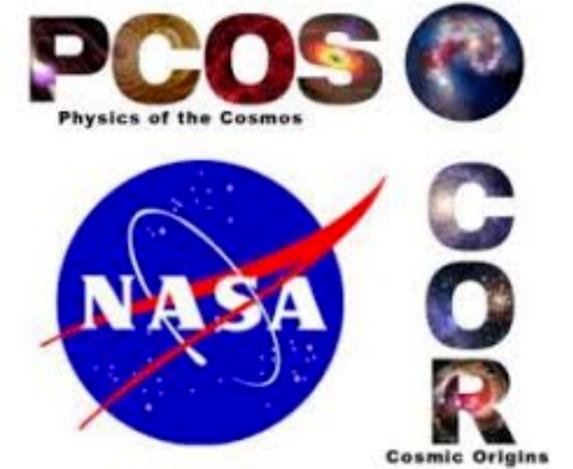


Physics of the Cosmos



X-ray Science Interest Group

John Tomsick
UC Berkeley/SSL

Ryan Hickox
Dartmouth College

Ralph Kraft
SAO

AAS Annual Meeting
10 January 2019

Schedule for this session



Intro to XRSIG

White papers submitted to XRSIG site for 2020 Decadal Survey

Lynx white papers - Ralph Kraft

Probing the black hole engine with measurements of the relativistic reflection component - Javier Garcia & John Tomsick

TBA - Erin Kara

The physics and astrophysics of X-ray outflows from Active Galactic Nuclei | Active Galactic Nuclei and host galaxy interaction: An insight into the dusty torus - Sibasish Laha

Cooking with X-rays: Can X-ray binaries heat the early Universe? - Antara R. Basu-Zych & Panayiotis Tzanavaris

Overview of White Papers listed at XRSIG



NASA's Astrophysics Program Analysis Groups and the 2020 Decadal Survey

Approved

Paul Hertz, Astrophysics Division Director, NASA

November 30, 2018

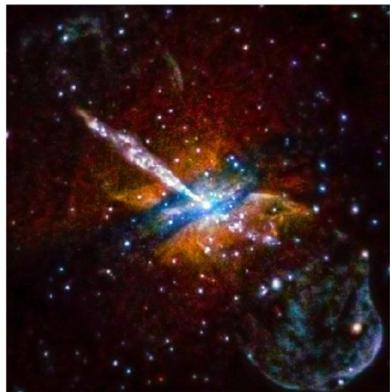
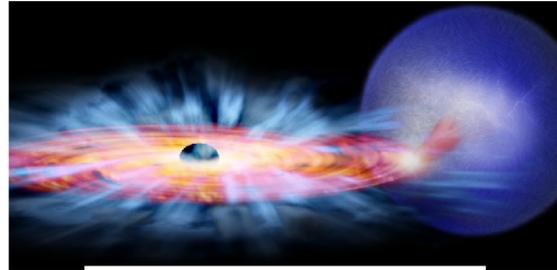
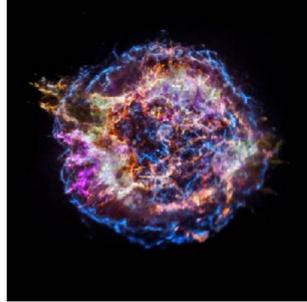
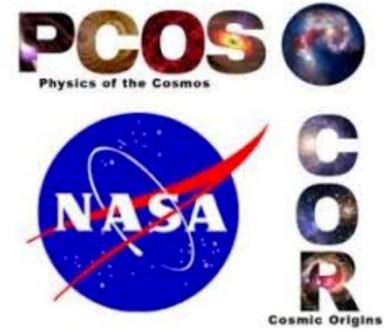
It is the policy of the NASA Astrophysics Division that PAGs, including their ECs and subgroups, are established to provide findings of analysis to the NASA Astrophysics Division.

These NASA established analysis groups are not established to provide input to the National Academies 2020 Decadal Survey in Astronomy and Astrophysics (Astro2020). Thus the PAGs, including their ECs and subgroups (e.g. SAGs, SIGs, Technology Interest Groups – TIGs, etc.), **shall not submit white papers to Astro2020**. However the PAGs, including the ECs and their sub-groups, may **submit summaries of accepted and publicly available PAG reports** (see below)...

...the PAGs, including the ECs and sub-groups, may serve their communities by **coordinating the writing of white papers and other input for Astro2020**.

The PAGs, including the ECs and sub-groups, may also serve their communities by **communicating to Astro2020 the existence of any analysis work done by the PAGs**, including the ECs and sub-groups, which has been completed, including approval for public release, and made available publicly.

Overview of White Papers listed at XRSIG



- X-ray Studies of Supernova Remnants - Brian Williams et al.
- Accretion in Stellar-mass Black Holes at High X-ray Resolution - Jon Miller et al.
- Time Domain Studies of Neutron Star and Black Hole Populations: Precision Identification of Compact Object Types - Neven Vulic et al.
- Probing the black hole engine with measurements of the relativistic reflection component - Javier Garcia, John Tomsick et al.
- Do Supermassive Black Hole Winds Impact Galaxy Evolution? - Fran
- Supermassive Black Hole Spin and Reverberation - Adu Zoghbi
- Density measurement of X-ray outflows (warm absorbers and ultra fast outflows) - Sibasish Laha et al.
- SMBH demographics in the the 2030s with ATHENA - Nico Cappelluti and Francesca Civano
- Physics of hot intracluster plasma from high-resolution X-ray imaging - Maxim Markevitch et al.
- Probing Macro-Scale Gas Motions and Turbulence in Galaxy Clusters Outskirts - Esra Bulbul et al.
- Galaxy cluster outskirts and the cosmic web with high resolution, low background X-ray imaging - Stephen Walker et al.
- Galaxy Cluster Cosmology and Astrophysics - Adam Mantz et al.
- Cooking with X-rays: Can X-ray binaries heat the early Universe? - Antara Basu-Zych et al.
- Much higher resolution X-ray telescopes with diffractive-refractive optics - Paul Gorenstein et al.
- Unlocking the Capabilities of Future High-Resolution X-ray Spectroscopy Missions Through Laboratory Astrophysics - Gabriele Betancourt-Martinez et al.